

ABSTRACT

An electron emitting element (11) is of a structure in which a semiconductor layer (14) is formed between an upper electrode (16) and a lower electrode (13),
5 wherein an organic compound adsorption layer (15) is formed on a semiconductor surface of the semiconductor layer (14) by causing the organic compound to be adsorbed on the semiconductor surface. Herein, the semiconductor layer (14) can be made of silicon or polysilicon and partly or as a whole porous. The absorbed organic compound can be a non-cyclic hydrocarbon, a compound obtained by coupling at least
10 an aldehyde group to a non-cyclic hydrocarbon, or a non-cyclic hydrocarbon having an unsaturated bond. As a result, there can be provided an electron emitting element capable of stably operating in the atmosphere or in a low vacuum even when being operated in the atmosphere or in the low vacuum and an imaging device using the electron emitting element.